Figure 5.5   Example IWEM Screen Identifying Several Types of Controls.

Dialog and Message Boxes

Dialog boxes appear throughout the IWEM software as additional data entry screens containing one or more of the controls mentioned above (i.e., see Figure 5.35: the Climate Center List dialog box), or as a way of informing the user (i.e., see Figure 5.3: the Full Source message box). Data entry dialog boxes usually appear as a direct result of clicking on a command button, whereas message boxes appear as the result of a user's input, or the model's calculation.

List Boxes

List boxes are used to display a list from which you can select one or many of the listed items. In Figure 5.4, the list box (box A) displays all of the constituents in the IWEM database that can be used in a Tier 2 analysis. This list permits multiple selections and is described in more detail in Section 5.5.1.6 of this document.

Radio Buttons

Radio buttons always appear in a set of two or more options and have a variety of uses. In the screen in Figure 5.4, the radio buttons (box C) control the display of constituents in the list box (box D). In the screen in Figure 5.5, you can use the radio buttons to select one of the available standards for the current constituent (box C). The selection is not recorded, however, until the |APPLY STANDARD| command button is pressed.

Data Grids

Data grids are used in many different ways throughout the IWEM software: to display data, to accept data, a combination of data display and entry, or to select a grid item that affects other controls on a screen. As a user, you will need to manipulate these grids to view, enter and select information. The grids are very similar to a spreadsheet in that the column widths and row heights can be manipulated with the mouse by moving the mouse cursor over the separators along the left side or top of the grid until the cursor changes to a horizontal or vertical bar. When the cursor changes, click and drag the mouse until you are happy with the new grid dimension, then release the mouse button. Moving from cell to cell can be controlled by mouse clicks or by the |TAB| or |ARROW| keys as explained in Section 5.2.2.

Selecting a particular row of the grid is accomplished by clicking on the cell in that row or along the left border of the grid or using the |TAB| or |ARROW| keys to move to a particular row. In the screen in Figure 5.4, removing a constituent from the list displayed in the data grid (box G) requires selecting the row of the grid and then clicking the command button with the left-pointing arrow (box E). Selecting a row in a grid is also required when you are assigning a standard to a constituent on the screen presented in Figure 5.5. When moving from row to row in this grid (box A), the radio buttons (box C) and text boxes (box E) change as a function of the constituent displayed in the selected grid row. In addition, when a standard has been selected, the last column in the grid is updated to reflect the selected standard.

Command Buttons

Command buttons are used throughout the tool to execute an action, to navigate from screen to screen, to verify a choice, or to acknowledge a message. Figure 5.4 shows a screen from IWEM where command buttons are used for various purposes: navigation (boxes D, H), moving information (box E), and initiating some action (box F). Command buttons are activated by a mouse click or by pressing the |ENTER| key when the button is highlighted or active. The screen in Figure 5.5 (box D) uses a command button to verify a selection made with a radio button group and then updates a cell in a data grid with the selected standard.

Drop-down Lists

Drop-down lists are used to make one selection from a list and then display only the selected item. In some cases, the list may be modified by the user. In Figure 5.6, you can select from the list of chosen constituents (box A) to view and/or edit constituent properties. The data grids are updated based upon the selection in the drop-down list. In Figure 5.7, a drop-down list is used to choose from a pre-defined list of options (box A), however, you may enter your own data. This type of control is usually referred to as "combo" box control: a combination of a text box control and drop-down box control.

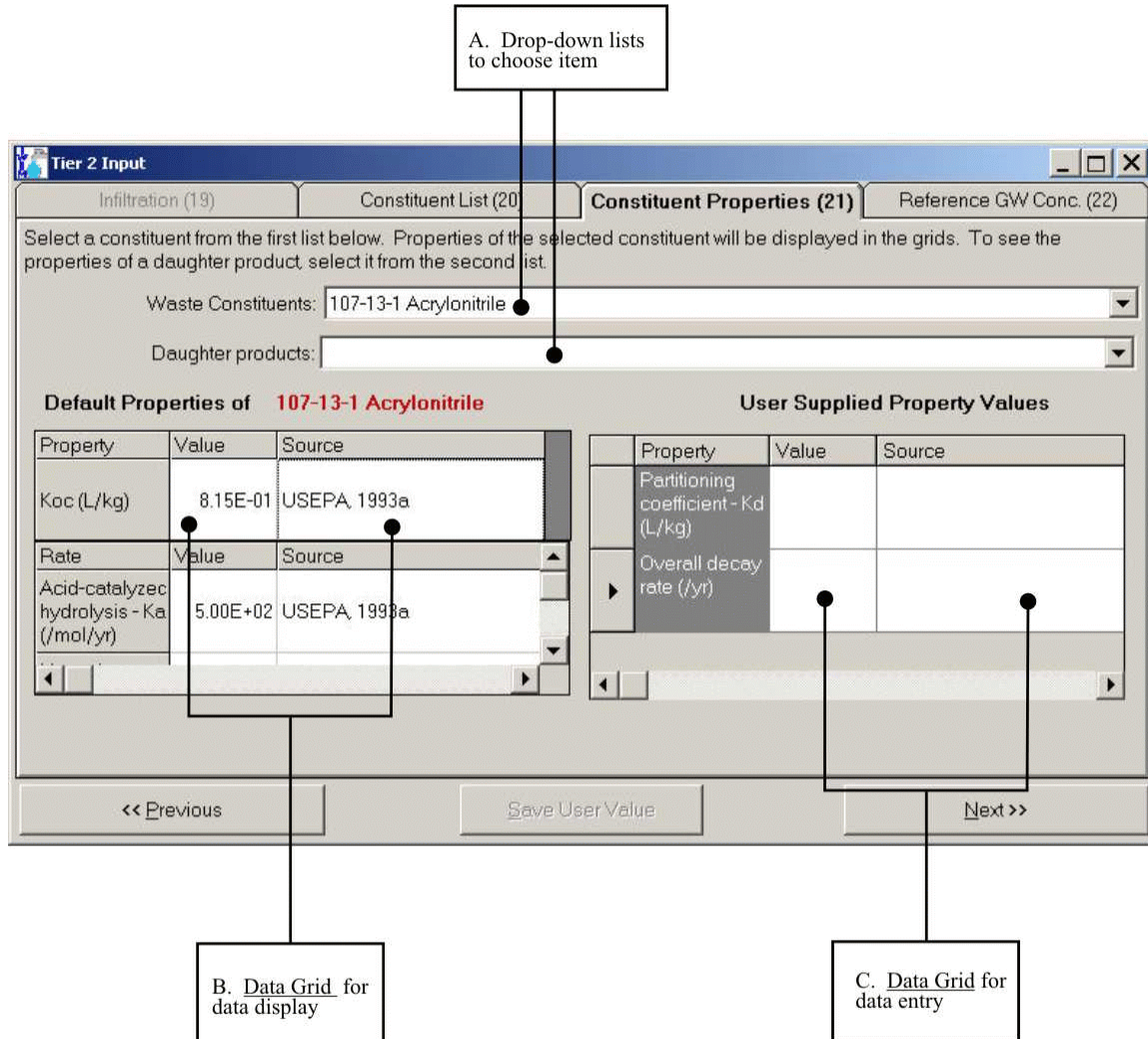A. Drop-down lists
to choose item

Figure 5.6   Example IWEM Screen Identifying Several Types of Controls.

B. Data Grid for
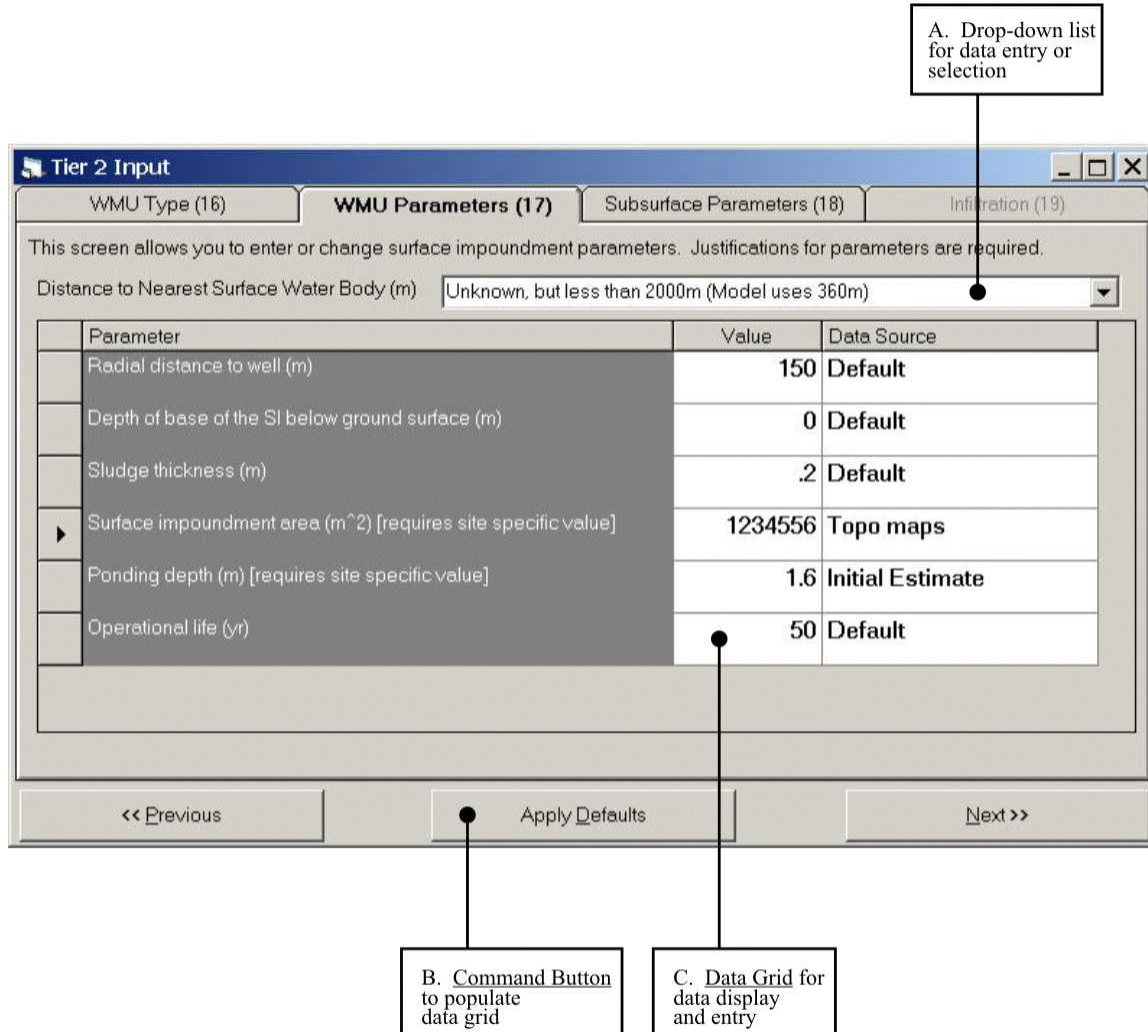data display

C. Data Grid for
data entry

Figure 5.7   Example IWEM Screen Identifying Several Types of Controls.

5.2.3 How Do I Use Online Help?

IWEM provides online |HELP| that can be accessed from any screen either by pressing the |F1| key or by selecting |HELP| CONTENTS| from the IWEM menu bar. Selecting |HELP| CONTENTS| from the IWEM menu bar will cause the screen shown as Figure 5.8 to be displayed.
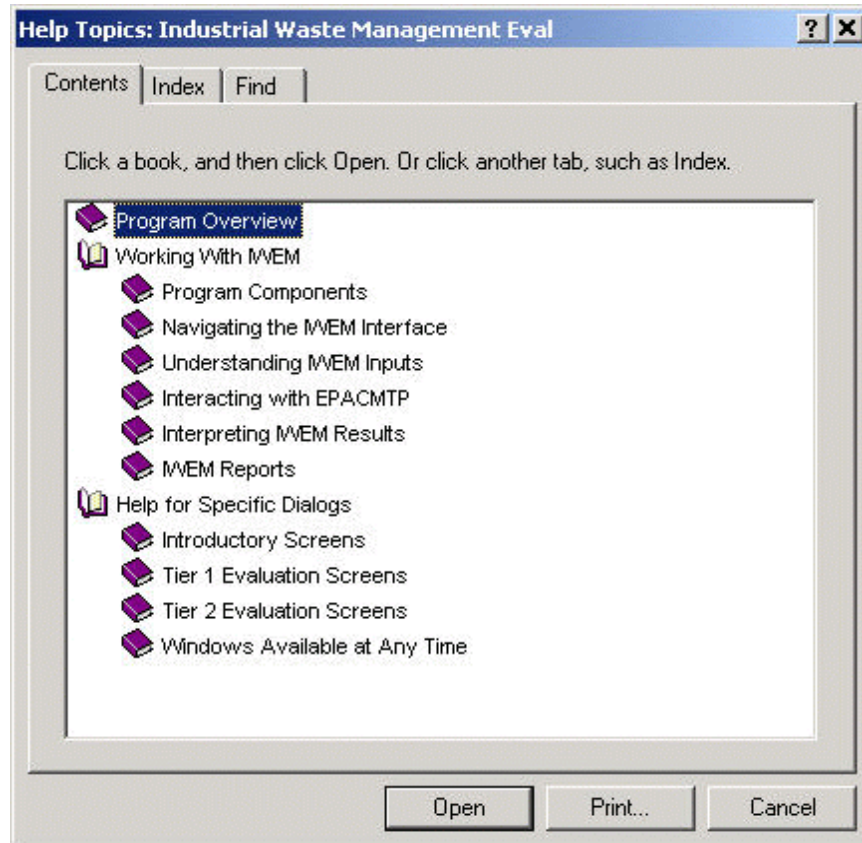

Figure 5.8   IWEM Online Help.

From this main |HELP| screen (shown in Figure 5.8), you can use the mouse or keyboard keys to explore the |CONTENTS| tab which is automatically displayed by default, or you can navigate to either of the other two tabs: |INDEX| and |FIND|. On the |CONTENTS| tab, you can double-click on the book icon to the left of each topic to expand that topic; some main topics contain multiple levels of sub-topics, but after navigating down to the most detailed level, a |HELP| screen will be displayed that contains descriptive text that explains a particular feature of the IWEM software. Many of these text descriptions contain

hyper-text links to related items in the online |HELP|; these hyper-text links are formatted with colored and underlined text. Double-click on any hyper-text link to display detailed information about that topic. On the |INDEX| tab, you can find help for a particular topic by typing a phrase into the text box at the top or by selecting a topic from the list box at the bottom and then clicking the |DISPLAY| button. The |FIND| tab enables you to search for specific words and phrases in online |HELP|, instead of searching for information by category. Just follow the on-screen prompts on the |FIND| tab to create and search a list of words in online |HELP|.

Pressing the |F1| key will automatically display an online |HELP| screen that is appropriate for the current IWEM screen that you are using. This information is similar to that presented in Sections 5.4 and 5.5 of this document and is also presented in the last topic listed on the |CONTENTS| tab: |HELP FOR SPECIFIC DIALOGS|.

Once you find the information you need in online |HELP|, you can use the main menu or the command buttons at the top of the |HELP| screen to skip to other sections of online |HELP| or to print out a particular topic.

5.2.4 How Do I Save My Work?

You have several options within the IWEM software to save your analysis. After performing a new Tier 1 or Tier 2 analysis, you can click on the |SAVE| button on the Toolbar or choose |FILE|SAVE| or |FILE|SAVE AS| from the Menu Bar to launch the standard Windows |Save As| dialog box. If you open a saved analysis, and then make changes to it, clicking on the |SAVE| button on the Toolbar or choosing |FILE|SAVE| from the Menu Bar will overwrite the contents of your original file with the current analysis settings; if you want to save these changes to a new file, you must choose |FILE|SAVE AS| from the Menu Bar. If you forget to save before trying to exit the IWEM software, a dialog box will automatically ask if you want to save your data before exiting the software.

For each saved analysis, IWEM creates two project files:

■   *.wem file
■   *.mdb file

The combination of these two files completely describes the information you have entered (*.mdb) and any model-generated results (*.wem). The asterisk (*) is replaced by the name you assign to the project; the files will be saved in the project folder you specified.

Note that IWEM will not allow you to save both model inputs and results at a point where the inputs do not correspond to the model-generated results (e.g., when Tier 2 results have been generated, you return to an input screen, change an input and attempt to save the project). If you do choose to save your work in a situation like this, only the inputs will be saved; that is, when you later open up this file, you will have to run either the Tier 1 or Tier 2 analysis to create the corresponding results.

You may open a previously saved IWEM analysis by clicking on any one of the following options:

- |OPEN| button on the Toolbar
- |FILE|OPEN| selection from the Menu Bar
- |OPEN SAVED ANALYSIS (*.WEM FILE)| radio button from the |IWEM ANALYSIS OPTIONS| dialog box (see Item B in Section 5.3)

Once the |OPEN| dialog box is displayed, highlight the appropriate file and click the |OPEN| button to open the desired file. You will then see a dialog box in which you can specify what type of analysis you want to perform – Tier 1 or Tier 2 (see Item B in Section 5.3).

5.2.5   How Do I Get Help If I Have a Problem or a Question?

If you have a copy of the *Guide* CD, you can open and read this *User's Guide* on-screen while the IWEM software is running on your computer. You may find it easier to use IWEM's online help or to print out a copy of the *User's Guide* and refer to this hard copy while you are learning to use the IWEM software or to use the IWEM online |HELP| (see Section 5.2.3). This section of the *User's Guide* contains screen-by-screen instructions for using the software.

A dialog box containing a keyword or parameter definition used in IWEM can be displayed by clicking on any underlined text in the Data Requirements screen (see Screen 3, in Section 5.3). These definitions can also be displayed at any time by choosing |DEFINITION WINDOW| from the |HELP| menu.

If you have a technical question about installing or running the IWEM software, you should contact the RCRA Information Center. This information center is a publicly accessible clearinghouse that provides up-to-date information on RCRA rulemakings and responds to requests for regulatory publications and information resources. Please note that the information center cannot provide regulatory interpretations.

To get your technical questions about the IWEM software answered, please contact the RCRA Information Center in any of the following ways:

- E-mail: rcra-docket@epa.gov
- Phone: 703-603-9230
- Fax: 703-603-9234
- In person: Hours: 9:00 am to 4:00 pm, weekdays, closed on Federal Holidays
             Location: U. S. EPA
                      West Building, Basement
                      1300 Constitution Avenue, NW
                      Washington, DC
- Mail: RCRA Information Center (5305W)
             U.S. Environmental Protection Agency
             Ariel Rios Building
             1200 Pennsylvania Avenue, NW
             Washington, DC 20460-0002

When contacting the RCRA Information Center, please cite RCRA Docket number: F1999-IDWA-FFFFF.

5.2.6   How Do I Begin Using the IWEM Software?

The following subsections provide a screen-by-screen tutorial that describes the data you are asked to enter at each screen and your data entry options (for instance, some Tier 2 input data are required and others are optional). The guidance will assist you in performing a Tier 1 and a Tier 2 analysis for an industrial WMU to determine the minimum recommended WMU design that will be protective of ground water. You will not need all the information provided here because this document addresses all WMU liner designs and several different levels of site-specific data for Tier 2. Follow only those subsections that are applicable to your particular waste and WMU.

5.3   Introductory Screens (Screens 1 through 5)

The text on Screens 1 through 5 provides a brief introduction to the IWEM software. Specifically, these screens present an overview of IWEM statement regarding proper use of the model and coordination with regulatory agencies, a list of data input requirements, a summary of model limitations, and the option to begin a Tier 1 or Tier 2 evaluation.

The key operational features of the introductory screens are as follows.

The features identified in Figures 5.9 through 5.13 are explained in more detail in the following paragraphs.

A. *Explanatory Text about IWEM*

The following five screens contain brief introductory information on the following aspects of the software:

- Screen 1: An overview of the IWEM software
- Screen 2: How to use IWEM
- Screen 3: Data requirements
- Screen 4: Model limitations
- Screen 5: Evaluation types

Introduction

IWEM Overview (1)

Purpose: This program is designed to give facility managers, regulatory agency staff, and citizens a simple-to-use tool to evaluate appropriate liner systems for landfills, surface impoundments, and waste piles, and to evaluate whether wastes are suitable for land application.

How: This program provides the results of fate and transport modeling of constituents from a waste management unit through subsurface soils to ground water. The model contains two evaluation tiers. Tier 1 provides recommendations for each type of waste management unit, based on estimated constituent concentrations in leachate from the unit. Tier 2 provides location-adjusted recommendations that are more tailored to a specific site, while still less resource intensive than a detailed site-specific analysis.

Tier 2 allows the user to enter data for a limited number of site-specific parameters, along with waste characteristics, to get recommendations for protective unit design and management.

Results: The model provides four types of recommendations:

☑ Show these introductory screens each time IWEM starts.

Next >>

B. Uncheck to skip introductory screens at next start-up
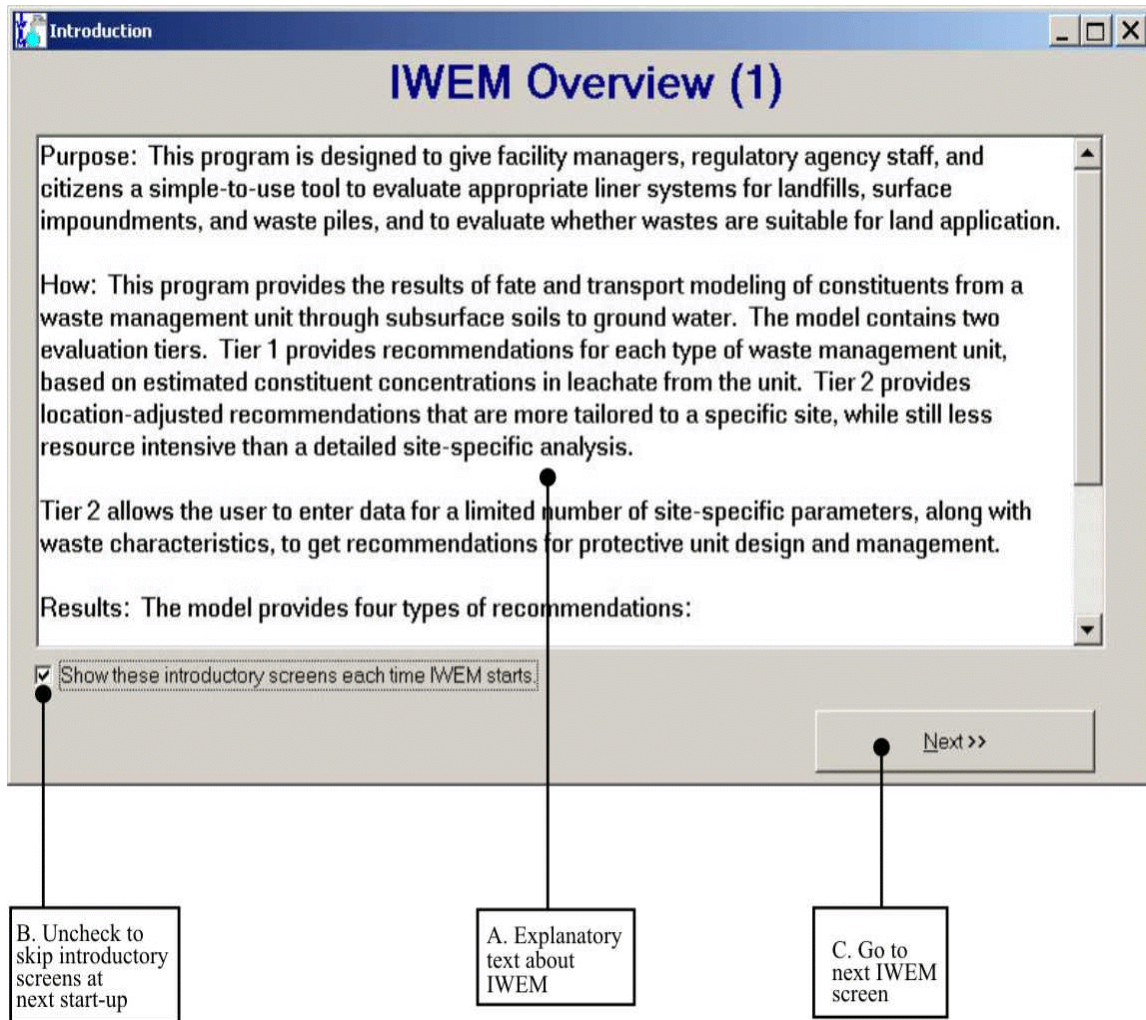
A. Explanatory text about IWEM

C. Go to next IWEM screen

Figure 5.9   Introduction: IWEM Overview (1).